

REMARKS

Claims 1-6, 8-12, and 30-37 are pending in the present application. Claims 13-29 were previously cancelled; claim 7 is cancelled herein. Claims 1, 30 and 36 have been amended. No new matter has been added. Applicants respectfully request reconsideration of the claims in view of the following remarks.

Claims 1, 3-6 and 8 have been rejected under 35 U.S.C. § 102(b) as assertedly being anticipated by U.S. Patent No. 6,420,218 to Yu (hereinafter “Yu”). Applicants respectfully traverse these rejections.

Claim 1 is amended herein to emphasize the features of the claimed invention, and as amended, particularly recites “...a strained channel region between the implanted impurity region and the top surface of the channel region;...”

Applicants respectfully submit that the oxide region 35 which the Examiner cites as the “implanted impurity” and the resulting structure of Yu cannot anticipate the elements of claim 1 because the reference fails to disclose either an implanted impurity region or the strained channel region formed between the impurity and the top surface of the channel region. This is unsurprising as Yu does not disclose any strained channel features. Applicants believe that claim 1 recites features that are neither anticipated, nor obviated, by the Yu reference and that the claim is allowable over the rejection. Accordingly, reconsideration and allowance are respectfully requested.

Claims 3-6 and 8 depend from and recite additional patentable features on the arrangement of claim 1. These dependent claims necessarily incorporate the features of claim 1, which is believed to be allowable, and are therefore also allowable over the rejection on the Yu reference. Reconsideration and allowance are respectfully requested.

Claims 2, 7, 9, 10 and 12 have been rejected under 35 U.S.C. § 103(a) as assertedly being unpatentable over Yu in view of U.S. Publication No.2002/0008289 A1 to Murota, *et al.* (hereinafter “Murota”). Applicants respectfully traverse these rejections.

Claim 7 has been cancelled.

Claims 2, 9, 10, and 12 depend from claim 1. Claim 1 now recites a strained channel region between the implanted impurity and the top surface of the channel region.

The Examiner asserts that Murota provides the elements missing from Yu, including a strained channel region. However, Murota cannot provide the strained channel region recited by Applicants, as Murota achieves strain by use of differing materials Si and SiGe; (see, e.g., Murota, paragraph 0017). Murota provides no disclosure of an implanted impurity and the strained region as claimed; neither does Yu, and the combination relied upon by the Examiner to reach the particular recitations of these dependent claims under §103 does not cure the deficiency in the rejection of the parent claim, claim 1, over Yu. Even if the proposed combination were made, the strained channel of Murota requires a lattice strain created by differing semiconductor materials (see Murota at paragraph 0017) and no strained region between an implanted impurity and the top of the channel region is disclosed. Thus, each of the dependent claims is believed to be allowable for, at least, incorporating the allowable features of claim 1. Reconsideration and allowance are therefore respectfully requested.

Claims 9 and 11 have been rejected under 35 U.S.C. § 103(a) as assertedly being unpatentable over Yu.

Claims 9 and 11 further depend from claim 1 and add further limitations. It is respectfully submitted that these dependent claims are allowable by reason of depending from an

allowable claim as well as for adding new limitations. The parent claim, claim 1, is believed to be allowable over Yu as argued above. Reconsideration and allowance are requested.

Claims 30-37 have been rejected under 35 U.S.C. § 103(a) as assertedly being unpatentable over Yu in view of Murota.

Claim 30 is another independent claim, which now recites in part:

“...a strained channel region between the implanted impurity region and the top surface of the channel region;...”

As argued above, Applicants submit that the “implanted impurity” of Yu, the CVD oxide region 35, does not provide the strained channel region as claimed, and that the lattice mismatch straining technique of Murota would, even if combined with Yu as proposed, not provide the strained channel region as claimed by Applicants. Accordingly, Applicants conclude that the elements of claim 30 are not disclosed by either reference taken singly not by the combination proposed and relied upon in the rejection, and that claim 30 is therefore unobvious over the prior art and allowable. Reconsideration and allowance are requested.

Claims 31- 35 depend from claim 30 and add further limitations. It is respectfully submitted that these dependent claims are allowable by reason of depending from an allowable claim as well as for adding new limitations. Reconsideration and allowance are therefore requested.

Claim 36 is another independent claim, which now recites in part:

“...at least one strained channel region formed between the at least one implanted impurity region and the top surface of the corresponding channel region.”

As argued above with respect to claim 1, Applicants respectfully submit that the Yu and Murota references, even if combined as proposed by the Examiner, do not disclose the claimed

elements of claim 36. Accordingly, Applicants believe that claim 36 is unobvious over the references, and allowable over the rejection. Reconsideration and allowance are therefore requested.

Claim 37 depends from claim 36 and adds further limitations. It is respectfully submitted that this dependent claim is allowable at least by reason of depending from an allowable claim as well as for adding new limitations.

In view of the above, Applicants respectfully submit that this response complies with 37 C.F.R. § 1.116. Applicants further submit that the claims are in condition for allowance. No new matter has been added by this amendment. If the Examiner should have any questions, please contact Mark E. Courtney Applicants' Attorney, at 972-732-1001 so that such issues may be resolved as expeditiously as possible. No fee is believed due in connection with this filing. However, in the event that there are any fees due, please charge the same, or credit any overpayment, to Deposit Account No. 50-1065.

Respectfully submitted,

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Date



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